GLOBAL SCHOOL – BASED HEALTH SURVEY

ZIMBABWE

2003

(GSHS ZIMBABWE 2003)

HARARE, MANICALAND AND MATEBELELAND NORTH PROVINCES

ZIMBABWE

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Acknowledgements

The successful completion of this survey would not have been possible without the support of numerous Government agencies, international Partners and individuals. My thanks go to the Director Technical Support and Deputy Director Disease Prevention and Control, in the Ministry of Health and Child Welfare who were very supportive in the whole process. The survey would not have been possible without the kind permission from the Permanent Secretary of Education and Culture and the Provincial Education Directors in the same Ministry.

The technical support for this survey was provided by WHO Regional Office, WHO Country office and Center for Disease Control (Atlanta). I am grateful for the support they provided through the training and technical support up to data analysis and report writing.

Special thanks goes to the Principals, Headmasters and pupils of all the schools who participated in the survey.

I also acknowledge the contribution of the various survey administrators who participated in data collection. Their names are as follows: Makoni E., Chirinda W., Shumba B., Kangwende, Tangwena A., Banda S.M., Dube V, Makaha M., Kazambu D., Nkomo B, Choga M, Moyo C, Sibanda B, Moyo I, Ncube S, Mhlanga G, Lubimbi C, Hlabangana B, Chinake TE, Gwinji J, Nyazika E, Magaisa R, Kadungure B, Gavi S, Manangazira P, Tsoka S, Shumba CS, Mudozhi K, Mujeka S.

Executive Summary

In 2001, WHO, in collaboration with UNAIDS, UNESCO, and UNICEF, and with technical assistance from the US Centers for Disease Control and Prevention (CDC), initiated development of the Global School-based Student Health Survey (GSHS). Since 2003, Ministries of Health and Education around the world have been using the GSHS to periodically monitor the prevalence of important health risk behaviours and protective factors among students.

The purpose of the GSHS is to provide accurate data on health behaviours and protective factors among students to:

- Help countries develop priorities, establish programmes, and advocate for resources for school health and youth health programmes and policies;
- Allow international agencies, countries, and others to make comparisons across countries and within countries regarding the prevalence of health behaviours and protective factors; and
- Establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion.

Methodology

The 2003 Zimbabwe GSHS was a school based cross sectional survey targeting the 13 to 15 year age group. Forms one to three classes were selected because they contained the target groups. Three provinces namely; Harare, Manicaland and Bulawayo-Matebeleland North province were purposively selected. The 2003 Zimbabwe GSHS employed a two-stage cluster sample design to produce a representative sample of students in forms one to three. The first-stage sampling frame consisted of all schools in the province containing any of the forms one to three classes. Schools were selected with probability proportional to school enrollment size. The second stage of sampling consisted of randomly selecting intact classrooms (using a random start) from each school to participate. All classrooms in each selected school were included in the sampling frame. All students in the sampled classrooms were eligible to participate in the GSHS.

Students completed the self-administered questionnaire during one classroom period. The questionnaire addressed the following topics: Respondent demographics, Alcohol and other drug use, Hygiene, Mental health, Physical activity, Protective factors, Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy, Tobacco use, and Violence and unintentional injury. Survey procedures were designed to protect student privacy by allowing for anonymous and voluntary participation.

Results

The school response rate was 100%, with an overall response rate of 84% and a total 5 665 students participated in the survey.

Alcohol and other drug use: In three provinces, the prevalence of current alcohol use among students ranged from 15.4% to 20.0%, and there was no significant difference in the prevalence for males compared to females. Only less than 3.9% of students usually got the alcohol they drank by buying it in a store or shop. The prevalence of lifetime drug use (using drugs, such as mbanje and glue, one or more times during their life) ranged from 7.7% to 15.1%.

Hygiene: In the three provinces, the percentage of students who did not clean or brush their teeth during the past 30 days ranged from 3.4% to 6.1%. Overall, 2.7% to 5.4% of students never or rarely washed their hands before eating during the past 30 days. In Manicaland, 10.4% of students never or rarely washed their hands after using the toilet or latrine during the past 30 days. 24.3% of the students in Manicaland did not have a place to wash their hands after toilet at school compared to 3.2% in Harare.
Mental Health: In the three provinces, the percentage of students who most of the time or always felt lonely during the past 12 months ranged from 13.8% to 21.3%. Manicaland reported a significantly higher percentage of students (32.7%) who seriously considered attempting suicide in the past 12 months compared to Harare (20.6%) and Matebeleland North (22.9%).
Physical activity: Overall, more than 85% of students participated in insufficient physical activity. There was no significant difference according to region and sex.
Protective factors: In the three provinces the percentage of students who missed classes or school without permission on one or more of the past 30 days ranged from 29.4% to 37.6%. Overall, 42.2% to 49.2% of students reported their parents or guardians checked to see if their homework was done most of the time or always during the past 30 days.
Sexual Behaviours: In Manicaland province 18.1% of students had had sexual intercourse during their life. This was significantly higher than the 10% reported in Harare. Male students in all the provinces were significantly more likely than female students to have had sexual intercourse. Overall, in all provinces 7.0% to 14.9% of students had sexual intercourse with multiple partners (i.e., two or more) during their life. Among students who had sexual intercourse during the past 12 months, 1.9% in Matebeleland North to 4.9% in Manicaland reported most of the time or always used a condom when they had sexual intercourse. Overall, 62.7% to 67.4% of students ever talked about HIV or AIDS with their parents or guardians.
Tobacco use: In the three sites students who had smoked cigarettes on one or more days during the past 30 days ranged from 5.8% in Harare, 8.3% in Matebeleland North and 10.2% in Manicaland. Overall, 9.6% to 15.8% of students used any other form of tobacco on one or more days during the past 30 days. Among students who smoked cigarettes during the past 12 months, 51.9% to 56.6% tried to stop smoking cigarettes.
Violence and Unintentional Injuries: In the three provinces the percentage of students who were in a physical fight one or more times during the past 12 months ranged from 37.9% to 47.3%. There only significant difference between sexes was in Harare. Manicaland reported a significantly higher percentage (73.2%) of students who were seriously injured one or more times during the past 12 months. Overall, 55.3% to 67.2% of students were bullied on one or more days during the past 30 days. Students in Manicaland (28.8%) were significantly more likely than students in Harare (14.0%) and Matebeleland North (16.7%) to carry a weapon to school for protection.

Conclusion: Consumption of alcohol among females is on the increase. There is need to review the amount of lessons and curriculum content on alcohol, drug and tobacco use. There is need to deliberately target rural schools in all water and sanitation community development programmes. The survey exposed high level of mental disorders among the students. The community, teachers and health workers will need training on how to provide adolescent friendly mental health services. Few students in this survey participated in sufficient physical activity. There is need for another survey to explore further the issues raised and the next GSHS in the country should also include the Dietary Module as physical activity and dietary issues are closely linked. This survey

reinforces the need to establish and reinforce intervention programs which are not only school based but involve the family structures, community prevention programs and government agencies to help prevent adolescent harmful practices. Behavioural studies and IEC material development can be used to address some of the problems. There is need not only to continue focusing on tobacco prevention programs but to also focus on youth cessation programs as well. Parents and guardians need to be supported and encouraged to continue talking about HIV and AIDS with their children. Abstinence and safer sex messages should continue to be advocated for and guided by operational researches. Multi-sectoral taskforces need to address issues of violence and injuries among students. Another GHSH survey is recommended to establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion.

1. BACKGROUND

The population distribution in Zimbabwe according to the 1999 Zimbabwe Demographic Health Survey shows that the proportion of children under 15 years was 42% in 1999. The median age of the population was 17.9 years.

By the mid 1990s Zimbabwe had achieved near Universal primary education for all. In 1994 the net enrolment ratio was 81.9%, improving to 93% in 2002. The achievement in high enrolment and literacy rates was mainly due to the universal primary education policy adopted soon after independence. By year 2000, Zimbabwe had 4 741 primary schools.[39]

Ensuring that children are healthy and are able to learn is an essential component of an effective education system. Good health and nutrition are not only essential inputs but also important outcomes of basic education of good quality. Education of good quality can lead to better health and nutrition outcomes for children, especially girls, and thus for the next generation of children as well. In addition, a safe and secure school environment can help protect children from health hazards, abuse and exclusion.[40]

2. INTRODUCTION

In 2001, WHO, in collaboration with UNAIDS, UNESCO, and UNICEF, and with technical assistance from the US Centers for Disease Control and Prevention (CDC), initiated development of the Global School-based Student Health Survey (GSHS). Since 2003, Ministries of Health and Education around the world have been using the GSHS to periodically monitor the prevalence of important health risk behaviours and protective factors among students. This report describes results from the first GSHS conducted in Zimbabwe by the Ministry of Health and Child Welfare in October 2003.

The purpose of the GSHS is to provide accurate data on health behaviours and protective factors among students to:

- Help countries develop priorities, establish programmes, and advocate for resources for school health and youth health programmes and policies;
- Allow international agencies, countries, and others to make comparisons across countries and within countries regarding the prevalence of health behaviours and protective factors; and
- Establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion.

The GSHS is a school-based survey conducted primarily among students aged 13-15 years. It measures behaviours and protective factors related to the leading causes of mortality and morbidity among youth and adults in the country. The survey consists of nine modules which cover:

- Respondent demographics
- Alcohol and other drug use
- Dietary behaviours

- Hygiene
- Mental health
- Physical activity
- Protective factors
- Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy
- Tobacco use
- Violence and unintentional injury

3. METHODS

The 2003 Zimbabwe GSHS was a school based cross sectional survey designed to cover three of the nine administrative provinces as per the Ministry of Education structures. The three provinces were purposively selected to represent an urban area, (Harare province) and a predominantly rural and agricultural population, (Manicaland province). These two provinces were also selected as they had taken part in the previous Global Youth Tobacco Survey (GYTS) in 1999 to allow for comparisons. The third province, Bulawayo-Matebeleland North included both the rural and urban population and represented a predominantly Ndebele population which is the second biggest population in the country.

3.1 Sampling

The 2003 Zimbabwe GSHS employed a two-stage cluster sample design to produce a representative sample of students in forms one to three. The first-stage sampling frame consisted of all schools in the province containing any of the forms one to three classes. Forms one to three classes were selected because they contained the target groups of the 13 to 15year age groups. Enrolment of schools was obtained from the Ministry of Education and culture. Schools were selected with probability proportional to school enrollment size. In Harare and Manicaland provinces 25 schools were selected from each of the two provinces and 26 schools were selected to participate in the Bulawayo-Matebeleland North province.

The second stage of sampling consisted of randomly selecting intact classrooms (using a random start) from each school to participate. All classrooms in each selected school were included in the sampling frame. All students in the sampled classrooms were eligible to participate in the GSHS.

3.2 Survey Administration

The national survey coordinator and provincial coordinators coordinated data collection. In each province, 8 survey administrators were selected and trained. These consisted of health promotion officers and the Masters in Public Health students.

Letters were sent to all heads of schools inviting them to participate in the GYTS. Each letter had a self-addressed return envelope, the consent form, and a section where the school enrolment was to be indicated. Follow up was made to those who had not responded. In ten schools, sampling was only done on the day of administration of the questionnaires, as these schools were too far to be visited and did not have any means of communication.

Students completed the self-administered questionnaire during one classroom period and recorded their responses directly on a computer-scannable answer sheet.

3.3 Ethical Consideration

Permission to carry out the survey was obtained from the Ministry of Health and Child Welfare who then applied to the Ministry of Education for permission to carry out the survey. Consent was also obtained from the Provincial Medical Directors and the Regional Directors of Education. These consent forms were then used to obtain permission from the schools. No difficulties were faced once the school heads saw the confirmation letters from the regional office. Although notification and consent forms for parents were printed, we were later informed that they were not necessary as long as no invasive procedure was to be done on the students.

Survey procedures were designed to protect student privacy by allowing for anonymous and voluntary participation. Confidentiality for the students was guaranteed by ensuring that they did not write their names on the forms and members of staff at the schools were asked to excuse themselves at the time of questionnaire administration.

3.4 GSHS Questionnaire

The Zimbabwe GSHS questionnaire contained 81 questions (49 questions from the core questionnaire modules and 32 from the core expanded and country specific questions). The questionnaire addressed the following topics:

- Respondent demographics
- Alcohol and other drug use
- Hygiene
- Mental health
- Physical activity
- Protective factors
- Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy
- Tobacco use
- Violence and unintentional injury

The questionnaire was developed by the survey coordinator, representatives from the Masters in public health program, the Zimbabwe National Family Planning programme, and the Health Promotion Unit. (Appendix 1) The module on Dietary factors was omitted because it involved obtaining weighing scales and height measurement.

3.5 Data Analysis

The data set was cleaned and edited for inconsistencies. Missing data were not statistically imputed. Data analysis was done using Epi-info version 3.3 and Sudaan software. This software takes into consideration the complex sample design that was used to compute prevalence estimates and 95% confidence intervals. GSHS data are representative of all students attending forms one to three in the selected regions. A weighting factor was applied to each student record to adjust for non-response and for the varying probabilities of selection. Weighting procedures are included in appendix 2.

4. RESULTS

4.1 Participation

For the 2003 Zimbabwe GSHS, the response rate is as listed below.

TABLE 1a). Participation rates by region

Region	Selected school	School participation rate	Student response rate	Overall response rate	Number of students who participated
Harare	25	100%	84%	**84%**	**1 997**
Manicaland	25	100%	85%	**85%**	**1 864**
Matebeleland North	26	100%	84%	**84%**	**1 804**

Demographics

The demographic characteristics of the sample are described in Table 1b)

Table 1b). Demographic characteristics of the sample in all regions 2003.

	Sex		Age			Form		
	Males	**Females**	**12yrs or younger**	**13-15**	**16yrs or older**	**One**	**Two**	**Three**
Harare	873	1111	29	1435	520	638	658	678
Manicaland	902	960	23	1114	705	602	455	780
Matebeleland North	740	1057	25	1304	460	776	590	424

The majority of the respondents were in the targeted 13 to 15 year age group. A total 5665 pupils participated in this survey, with the majority being female (55.4%). The highest number of respondents was from Harare (total 1984). The participation rate was 84%.

The results which are described in this paper will only include responses obtained from the 13 to 15 year age groups and excludes responses from students who fall outside this age range.

4.2 Alcohol and Other Drug Use

Worldwide, alcohol use causes 3% of deaths (1.8 million) annually, which is equal to 4% of the global disease burden. Besides the direct effects of intoxication and addiction, alcohol use causes about 20% to 30% of esophageal cancer, liver disease, homicide and other intentional injuries, epilepsy, and motor vehicle accidents worldwide (1). In most countries, alcohol-related mortality is highest among 45- to 54-year-olds, but the relationship between the age of initiation of alcohol use and the pattern of its use and abuse in adulthood makes the study of alcohol consumption among adolescents important (2).

While adverse health consequences from long-term chronic alcohol use may not cause death or disability until fairly late in life, acute consequences of alcohol use, including intentional and unintentional injuries, are far more common among youth and young adults. Unintentional injuries are the leading cause of death among 15- to 25-year-olds and many of these injuries are related to alcohol use (3). Young people who drink are more likely to use tobacco and other drugs and engage in risky sexual behaviour, than those who do not drink (4). Problems with alcohol can impair adolescents` psychological development and influence both the school environment and leisure time negatively (5).

Table 2. Alcohol use and other drug use among students, by sex, 2003.

ALCOHOL AND OTHER DRUG USE									
FACTOR	**MATEBELELAND NORTH**			**HARARE**			**MANICALAND**		
	total	**male**	**female**	**total**	**male**	**female**	**total**	**male**	**female**
% who drank alcohol on ≥ 1 day of the past 30 days	20.0 (±3.5)	23.2 (±5.8)	17.7 (±5.4)	15.4 (±1.9)	17.6 (±2.8)	13.3 (±3.2)	17.0 (±4.1)	20.9 (±5.7)	13.2 (±4.4)
% who drank ≥ 1 drinks per day on the days they drank alcohol during past 30 days	13.2 (±3.1)	15.8 (±5.4)	11.4 (±3.5)	9.2 (±1.6)	10.6 (±1.8)	7.7 (±2.6)	12.8 (±4.3)	16.2 (±5.8)	9.4 (±4.5)
% who got the alcohol they drink by buying in a store or shop	1.8 (±1.0)	2.1 (±1.6)	1.7 (±1.0)	1.8 (±1.1)	3.0 (±2.0)	0.8 (±0.7)	3.9 (±1.8)	5.5 (±3.1)	2.4 (±1.3)
% who usually drink beer, lager or stout	3.2 (±1.3)	4.1 (±2.6)	2.6 (±1.2)	2.6 (±0.9)	3.4 (±1.6)	1.7 (±0.8)	3.5 (±1.9)	4.9 (±2.8)	2.2 (±1.7)
% who usually drink alcohol with friends	11.2 (±2.7)	16.0 (±4.0)	7.8 (±4.7)	6.7 (±1.8)	8.2 (±3.1)	5.0 (±1.7)	8.6 (±2.4)	11.5 (±4.1)	5.9 (±3.3)
% who drank so much alcohol that they were really drunk on ≥ 1 times during their life	19.0 (±2.3)	24.2 (±5.1)	15.3 (±3.1)	16.5 (±2.3)	19.4 (±3.4)	13.8 (±2.7)	21.3 (±3.3)	25.4 (±4.4)	17.3 (±5.1)
% who had a hangover, felt sick, got into trouble with family and friends, missed school, got into fights as a result of drinking alcohol ≥ 1 times during their life	18.4 (±3.1)	21.1 (±4.1)	16.4 (±2.7)	13.0 (±2.6)	13.3 (±3.3)	12.4 (±2.9)	24.2 (±6.3)	26.3 (±6.5)	22.1 (±7.5)
% whose one or both parents / guardians drink alcohol	48.8 (±4.6)	49.0 (±6.3)	48.4 (±6.7)	48.9 (±2.3)	49.8 (±3.9)	48.0 (±3.8)	41.6 (±3.2)	40.2 (±4.4)	43.0 (±3.7)

% who claim most or all of their friends drink alcohol	8.9 (±3.1)	9.9 (±4.4)	8.2 (±4.2)	5.1 (±1.2)	5.9 (±3.3)	4.4 (±1.6)	9.4 (±2.1)	9.6 (±3.3)	9.3 (±3.7)
% who during this school year were taught in class the dangers of alcohol use	58.2 (±5.1)	55.7 (±5.3)	60.2 (±5.9)	51.6 (±7.1)	48.8 (±8.5)	54.4 (±6.5)	51.9 (±6.4)	48.5 (±7.1)	55.3 (±8.2)
% who used drugs e.g. mbanje, glue ≥ 1 times during their life	10.4 (±2.5)	15.8 (±3.5)	6.0 (±2.3)	7.7 (±1.4)	12.1 (±2.8)	3.6 (±1.2)	15.1 (±4.8)	18.9 (±6.1)	11.3 (±4.9)
% who during this school year were taught in class the dangers of using drugs e.g. mbanje, glue	57.0 (±5.7)	54.3 (±6.7)	59.3 (±5.5)	48.5 (±5.6)	44.8 (±6.1)	51.6 (±5.3)	47.5 (±5.6)	46.8 (±5.3)	48.3 (±7.8)

Figures in parentheses indicate 95% confidence interval.

In three provinces, the prevalence of current alcohol use among students (i.e., drinking at least one drink containing alcohol on one or more of the past 30 days) ranged from 15.4% to 20.0%. However there was no significant difference in the prevalence among the regions. In all the regions there was no significant difference in the prevalence for males compared to females. Overall, 9.2% to 13.2% of students drank more than one drink per day on the days they drank alcohol during the past 30 days. There was no difference when compared by sex. Less than 3.9% of students usually got the alcohol they drank by buying it in a store or shop. Only less than 3.5% of the students usually drank beer or lager. During their life, 16.5% to 21.3% of students in all the regions drank so much alcohol they were really drunk one or more times.

In the three provinces, the prevalence of lifetime drug use (using drugs, such as mbanje and glue, one or more times during their life) ranged from 7.7% to 15.1%. There was no difference in prevalence between Bulawayo and Manicaland. Harare however, reported a lower prevalence (7.7%) compared to Manicaland (15.1%). Except for Manicaland, Bulawayo and Harare had male students significantly more likely than female students to report lifetime drug use. Only about half of the students reported having been taught in class the dangers of using alcohol, and drugs.

4.3 Hygiene

Dental caries are one of the most common chronic childhood diseases (8). Dental caries and other oral disease can affect the ability to eat, appearance, communication, overall health status, and the ability to learn. In both developed and developing countries, many children do not have access to water fluoridation or professional dental care. Daily tooth cleaning or brushing can help prevent some dental disease.

Diarrhoeal diseases kill 2 to 3 million children in developing countries every year (9). Hand-washing with soap alone could cut deaths in half. Removing excreta and cleaning hands with soap after contact with faecal material prevents transmission of the bacteria, viruses, and protozoa that cause diarrhoeal diseases.

Table 3. Hygiene-related behaviours, by sex, 2003.

HYGIENE									
FACTOR	MATEBELELAND NORTH			HARARE			MANICALAND		
	Total	male	Female	total	male	female	total	male	female
% not clean/brush teeth in past 30 days	3.4 (±1.1)	4.6 (±2.1)	2.4 (±0.8)	4.2 (±1.1)	5.4 (±1.8)	2.8(±1.4)	6.1 (±2.8)	7.3 (±3.9)	4.9 (±1.5)
% rarely/never washed hands before eating in last 30days	3.2 (±1.1)	3.1 (±1.2)	3.2 (±1.7)	2.7 (±0.9)	3.6 (±1.8)	1.8 (±0.8)	5.4 (±2.1)	4.7 (±1.4)	6.1 (±3.2)
% usually wash hands under running water before eating	44.2 (±12.4)	41.0 (±11.7)	46.4 (±16.6)	47.4 (±10.8)	42.2 (±9.6)	52.5 (±13.6)	26.0 (±12.6)	24.6 (±13.7)	27.3 (±13.0)
% never/rarely wash hands after toilet past 30 days	3.6 (±2.0)	4.7 (±2.7)	2.9 (±1.6)	4.4 (±1.5)	5.5 (±2.0)	3.0 (±1.4)	10.4 (±3.0)	12.1 (±4.5)	8.8 (±2.9)
% with no place to wash hands after toilet at school	8.4 (±3.4)	9.6 (±3.1)	7.1 (±4.1)	3.2 (±1.4)	5.0 (±2.2)	1.6 (±1.2)	24.3 (±5.3)	24.9 (±0.6)	23.6 (±9.1)
% rarely/never used soap when washing hands past 30 days	14.7 (±4.0)	16.1 (±7.2)	13.6 (±4.5)	12.6 (±2.7)	14.6 (±2.9)	10.7 (±3.9)	25.8 (±4.0)	26.3 (±4.8)	25.2 (±5.1)

Figures in parentheses indicate 95% confidence interval.

In the three provinces, the percentage of students who did not clean or brush their teeth during the past 30 days ranged from 3.4% to 6.1%. There was no significant difference according to sex and region. Overall, 2.7% to 5.4% of students never or rarely washed their hands before eating during the past 30 days. There was no difference according to sex. In Manicaland 10.4% of students never or rarely washed their hands after using the toilet or latrine during the past 30 days, compared to Bulawayo where only 3.6% reported rarely washing their hands after toilet. Students in Manicaland were significantly more likely than other students in the two other regions to never or rarely wash their hands after using the toilet or latrine. Overall, Manicaland students (25.8%) were significantly more likely than students from the other regions to never or rarely use soap when washing their hands. Almost a quarter of the students in Manicaland did not have a place to wash their hands after toilet at school compared to 3.2% in Harare. Only about a quarter (26.0%) of Manicaland students reported usually washing hands under running water before eating compared to 44.2% in Bulawayo and 47.4% in Harare.

4.4 Mental Health

Anxiety disorders, depression and other mood disorders, and behavioural and cognitive disorders are among the most common mental health problems among adolescents. Every country and culture has children and adolescents struggling with mental health problems. Most of these young people suffer needlessly, unable to access appropriate resources for recognition, support, and treatment. Ignored, these young people are at high risk for abuse and neglect, suicide, alcohol and other drug use, school failure, violent and criminal activities, mental illness in adulthood, and health-jeopardizing impulsive behaviours. Depression during adolescence and young adulthood is recognized increasingly as an important public health and social problem. Worldwide, about 4 million adolescents attempt suicide annually, resulting in at least 100,000 deaths (10-12).

Table 4: Mental health issues among students, by sex, 2003.

MENTAL HEALTH									
FACTOR	MATEBELELAND NORTH			HARARE			MANICALAND		
	total	male	female	total	male	female	total	male	female
% who felt lonely most of the time in past 12 months	16.3 (±3.0)	15.2 (±2.3)	17.2 (±3.9)	13.8 (±1.9)	15.1 (±2.4)	12.8 (±3.0)	21.3 (±4.9)	22.8 (±4.2)	19.9 (±6.1)
% who always or most of the time felt so worried about something that they could not sleep in last 12 months	11.8 (±1.9)	11.9 (±3.8)	11.8 (±2.4)	12.2 (±2.3)	11.3 (±2.5)	13.1 (±3.1)	16.7 (±3.8)	17.3 (±3.3)	16.1 (±4.7)
% who always or most of the time felt so worried about something that they wanted to use alcohol or drugs in last 12 months	5.0 (±1.6)	5.4 (±1.4)	4.7 (±2.2)	3.9 (±1.6)	4.5 (±2.1)	3.4 (±1.8)	9.8 (±4.2)	9.4 (±4.3)	10.3 (±4.5)
% who felt sad or hopeless almost everyday for ≥two weeks that they stopped doing their usual activities in past 12 months	34.4 (±4.3)	32.6 (±6.2)	35.4 (±4.4)	36.2 (±4.5)	34.6 (±5.3)	37.7 (±4.5)	44.7 (±4.7)	42.8 (±5.8)	46.6 (±4.3)
% who seriously considered attempting suicide in past 12 months	22.9 (±2.2)	23.0 (±3.7)	22.5 (±3.5)	20.6 (±1.8)	19.4 (±2.8)	21.7 (±3.0)	32.7 (±6.4)	32.8 (±7.6)	32.6 (±6.2)
% who made a plan about how they would attempt suicide in past 12 months	22.5 (±2.8)	24.3 (±5.4)	20.9 (±3.2)	21.7 (±3.6)	20.0 (±4.5)	22.9 (±4.2)	31.3 (±6.8)	33.2 (±7.9)	29.5 (±6.4)
% who have no close friends	11.6 (±2.4)	12.2 (±3.7)	11.3 (±2.2)	10.5 (±2.0)	10.2 (±3.4)	10.5 (±2.3)	13.9 (±2.0)	13.2 (±3.2)	14.5 (±3.1)
% who were taught in class how to handle stress well, this school year	31.3 (±4.9)	31.0 (±5.7)	31.7 (±6.9)	32.7 (±3.9)	33.5 (±5.6)	32.0 (±4.3)	42.2 (±4.4)	41.8 (±6.4)	42.5 (±5.9)
% taught in class this school year causes of mental disorders	26.4 (±4.5)	23.1 (±4.1)	28.9 (±6.3)	30.4 (±4.0)	29.7 (±4.8)	31.2 (±4.4)	35.4 (±4.0)	34.7 (±5.2)	36.1 (±5.0)
% taught in class where to get help for mental health problems	35.6 (±3.5)	31.9 (±4.4)	38.5 (±5.2)	42.1 (±4.3)	39.5 (±3.8)	44.8 (±5.2)	40.0 (±4.8)	33.9 (±4.5)	45.8 (±6.3)

Figures in parentheses indicate 95% confidence interval.

In the three provinces, the percentage of students who most of the time or always felt lonely during the past 12 months ranged from 13.8% to 21.3%. Manicaland had a significantly higher percentage of students (21.3%) who most of the time or always felt lonely during the past 12 months compared to Harare (13.8%). There was no significant difference between male and female in all regions who felt lonely most of the time or always. The percentage of students who most of the time or always felt so worried about something that they could not sleep at night during the past 12 months ranged from 11.8% to 16.7%, with no significant difference in sex and region. The percentage of students who felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing their usual activities during the past 12 months ranged from 34.4% to 44.7%, with Manicaland reporting a significantly higher percentage (44.7%) compared to Bulawayo (34.4%).

Manicaland reported a significantly higher percentage of students (32.7%) who seriously considered attempting suicide in the past 12 months compared to Harare (20.6%) and Matebeleland North (22.9%). There was no difference according to sex in the three regions. A similar pattern was noted for students who made a plan about they would attempt suicide during the past 12 months. Manicaland (31.3%) reported a significantly higher percentage compared to the other regions (Harare 21.7% and Matebeleland North 22.5%). The percentages of students who had been taught in class how to handle stress well in school were; Harare (32.7%), Matebeleland North (31.3%), and Manicaland (42.2%).

4.5 Physical Activity

Participating in adequate physical activity throughout the life span and maintaining normal weight are the most effective ways of preventing many chronic diseases, including cardiovascular disease and diabetes (13). The prevalence of type 2 diabetes is increasing globally and now is occurring during adolescence and childhood (14). Participating in adequate physical activity also helps build and maintain healthy bones and muscles, control weight, build lean muscle, reduce fat, reduce feelings of depression and anxiety, and promote psychological well-being (15).

Table 5: Physical activity among students, by sex, 2003.

PHYSICAL ACTIVITY									
FACTOR	MATEBELELAND NORTH			HARARE			MANICALAND		
	total	Male	Female	total	male	female	total	male	female
% who were physically active 7 days for a total of at least 60 minutes per day during the past 7 days	12.8 (±2.5)	14.4 (±4.6)	11.6 (±2.7)	14.4 (±3.1)	16.1 (±3.4)	12.9 (±3.9)	11.7 (±3.4)	13.0 (±4.5)	10.5 (±3.4)
% who were physically active 7 days for a total of at least 60 minutes per day during a typical or usual week	11.0 (±2.5)	11.4 (±3.8)	10.8 (±3.3)	10.8 (±2.9)	12.5 (±3.2)	9.2 (±3.6)	8.8 (±2.3)	10.0 (±3.3)	7.7 (±2.0)
% who participated in an insufficient amount of physical activity	85.9 (±3.5)	84.3 (±5.0)	87.0 (±4.6)	85.1 (±3.7)	83.2 (±4.2)	86.8 (±5.1)	88.1 (±3.8)	88.2 (±3.8)	87.9 (±4.6)
% who spent ≥ 3 hrs per day sitting and watching television, playing computer games, talking with friends, or doing other sitting activities during a typical or usual day	42.3 (±4.4)	42.9 (±5.5)	42.0 (±5.6)	43.8 (±4.0)	42.8 (±4.1)	44.7 (±5.4)	40.4 (±4.8)	38.9 (±4.2)	42.0 (±6.7)
% who did not walk or ride a bike to school during past 7 days	42.8 (±5.6)	37.6 (±5.2)	46.9 (±6.4)	41.0 (±4.1)	36.5 (±4.4)	45.1 (±4.8)	45.9 (±3.5)	44.1 (±3.5)	47.7 (±5.7)
% who usually take ≤ 29 mins to get to and from school each day during the past seven days	62.7 (±7.2)	57.9 (±9.5)	66.6 (±7.7)	59.6 (±3.6)	65.4 (±3.5)	54.2 (±5.0)	58.1 (±9.0)	56.2 (±9.2)	59.9 (±9.8)

% who walked or rode a bicycle to and from school for a total of 150 mins on ≥ 1 of the past 7 days	80.6 (±6.6)	79.0 (±6.6)	82.1 (±7.1)	76.9 (±3.4)	79.2 (±3.9)	74.7 (±4.2)	82.7 (±4.3)	81.6 (±5.9)	83.7 (±4.4)

Figures in parentheses indicate 95% confidence interval.

Overall, more than 85% of students participated in insufficient physical activity (i.e., participated in physical activity for a total of at least 60 minutes per day on five or fewer days on average). There was no significant difference according to the region or sex. Overall, four out of ten students did not walk or use a bicycle to and from school during the past 7 days and there was no difference according to sex. Almost six out of ten students in all the regions usually took less than 30 minutes to get to and from school each day during the past 7 days. There was no significant difference according to region and sex.

4.6 Protective Factors

For most adolescents, school is the most important setting outside of the family. School attendance is related to the prevalence of several health risk behaviors including violence and sexual risk behaviors (16-18). Students' perceptions of the school environment are associated significantly to their health and well-being (19-20). Perceived high-level support from fellow students is related to subjective health complaints, satisfaction with school, and increased physical activity (21-22).

One of the most reliable and powerful findings in research on adolescence and their families is the importance of adequate regulation of adolescents, measured in terms of supervision, monitoring, rule-setting, and other forms of behavioral control (23-25). Without adequate regulation and monitoring, children do not learn to self-regulate, tend to be impulsive, prone to risk taking, more susceptible to peer influences, and more likely to engage in various health risk behaviors including alcohol use and sexual risk behaviors (26). Parental bonding and connection is associated with lower levels of depression and suicidal ideation, alcohol use, sexual risk behaviors, and violence (27).

Table 6: Protective factors among students, by sex, 2003.

PROTECTIVE FACTORS									
FACTOR	MATEBELELAND NORTH			HARARE			MANICALAND		
	total	male	female	total	Male	female	total	male	female
% who missed classes or school without permission on one or more of the past 30 days	29.4 (±4.9)	37.2 (±4.3)	23.6 (±6.6)	31.2 (±3.3)	33.5 (±5.0)	28.8 (±2.7)	37.6 (±6.6)	39.4 (±7.4)	35.9 (±7.6)
% who reported that most of students in their school were kind and helpful most of the time or always during past 30 days	34.0 (±4.4)	27.4 (±7.1)	39.1 (±4.0)	35.8 (±3.6)	31.0 (±4.5)	39.9 (±4.3)	36.3 (±2.9)	34.8 (±4.0)	37.8 (±4.3)
% whose parents / guardians checked to see if their homework was done most of the time or always during the past 30 days	42.2 (±4.3)	40.6 (±3.8)	43.2 (±6.8)	49.2 (±5.7)	47.9 (±5.9)	50.2 (±7.5)	42.5 (±4.1)	41.4 (±6.9)	43.5 (±3.5)

% whose parents or guardians understood their problems and worries most of the time or always during past 30 days	43.3 (±2.5)	40.6 (±3.4)	45.5 (±1.9)	51.2 (±2.8)	48.7 (±4.2)	53.6 (±4.8)	41.9 (±5.8)	39.2 (±8.1)	44.5 (±6.2)
% whose parents/guardians knew what they were doing with their free time most of the time or always during the past 30 days	38.0 (±3.0)	34.5 (±3.8)	40.7 (±4.8)	47.6 (±2.7)	46.1 (±4.3)	49.2 (±3.3)	40.5 (±3.8)	38.6 (±6.9)	42.4 (±3.3)

Figures in parentheses indicate 95% confidence interval.

In the three provinces the percentage of students who missed classes or school without permission on one or more of the past 30 days ranged from 29.4% to 37.6%. Male students were not significantly more likely than female students to miss classes or school without permission. Overall, 34.0% to 36.3% of students reported that most of the students in their school were kind and helpful most of the time or always during the past 30 days. No significant sex differences were noted. Overall, 42.2% to 49.2% of students reported their parents or guardians checked to see if their homework was done most of the time or always during the past 30 days. An almost similar percentage (41.9% to 51.2%) of students reported their parents or guardians understood their problems and worries most of the time or always during the past 30 days. In Harare province students (51.2%) were significantly more likely than the two other provinces (Matebeleland North 43.3%, Manicaland 41.9%) to report their parents or guardians understand their problems and worries most of the time or always. Similarly Harare students (47.6%) were significantly more likely than Manicaland students (40.5%) and Matebeleland North students (38.0%) to report their parents or guardians really know what they are doing with their free time most of the time or always.

4.7 Sexual Behaviours That Contribute to HIV Infection, Other STI, and Unintended Pregnancy

Since the epidemic began, more than 60 million people have been infected with HIV. More than half of those newly infected with HIV today are between 15 and 24 years old. Each day, nearly 6,000 become infected. An estimated 11.8 million young people aged 15 to 24 are living with HIV and AIDS (28). HIV infection and AIDS is by far the leading cause of death in sub-Saharan Africa and the 4th leading cause of death worldwide. In many countries, HIV infection and AIDS is reducing average life expectancy, threatening food security and nutrition, dissolving households, overloading the health care system, reducing economic growth and development, and reducing school enrollment and the availability of teachers (29).

Sexually transmitted infections (STI) are among the most common causes of illness in the world and have far-reaching health consequences (30). For example, untreated STI can lead to cervical cancer, pelvic inflammatory diseases, and ectopic pregnancies. Of the estimated 333 million new STI that occur worldwide each year, at least 111 million occur in young people under 25 years of age.

Table 7: Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy among students, by sex, 2003.

SEXUAL BEHAVIOURS									
FACTOR	BULAWAYO			HARARE			MANICALAND		
	Total	Male	female	total	male	female	total	male	female
% who had ever had sexual intercourse	11.7 (±3.6)	21.9 (±7.7)	5.3 (±2.5)	10.0 (±1.8)	17.5 (±3.6)	3.9 (±1.8)	18.1 (±4.9)	28.0 (±7.8)	9.6 (±4.1)
% whose main reason to not have sexual intercourse was because they wanted to wait until they are married	52.7 (±5.2)	42.1 (±8.9)	59.3 (±5.8)	58.6 (±3.2)	48.7 (±6.2)	66.9 (±5.3)	49.7 (±2.3)	34.1 (±5.9)	63.3 (±5.0)
% who had sexual intercourse for the first time before age 13 years	8.4 (±2.6)	16.9 (±6.1)	3.1 (±2.0)	4.9 (±1.0)	8.8 (±2.7)	1.6 (±1.0)	11.6 (±3.7)	18.6 (±6.7)	5.5 (±2.3)
% who had sexual intercourse with ≥ 2 people during their lifetime	7.0 (±1.9)	13.6 (±3.8)	2.7 (±2.0)	5.5 (±1.3)	9.9 (±2.9)	1.7 (±1.1)	14.9 (±6.0)	22.2 (±9.9)	8.6 (±3.6)
% who had sexual intercourse during the past 12 months	3.9 (±0.9)	6.5 (±1.3)	2.2 (±1.1)	4.1 (±0.8)	6.2 (±1.7)	2.2 (±0.9)	6.0 (±2.2)	9.0 (±4.0)	3.4 (±1.5)
% who most of the time or always used any method of birth control during the past 12 months	3.1 (±1.2)	4.2 (±1.9)	2.4 (±1.3)	2.8 (±1.6)	3.5 (±2.4)	2.2 (±1.6)	9.9 (±4.6)	14.0 (±4.6)	6.1 (±4.8)
% who would most likely get birth control from a pharmacy, clinic, or hospital if they wanted it	60.1 (±5.5)	55.9 (±8.3)	63.5 (±4.9)	54.0 (±4.4)	53.9 (±4.5)	54.1 (±6.6)	46.4 (±7.8)	44.4 (±8.2)	48.3 (±8.7)
% who most of the time or always used a condom when they had sexual intercourse during the past 12 months	1.9 (±0.9)	2.1 (±1.3)	1.8 (±1.4)	3.4 (±1.4)	3.9 (±2.9)	2.8 (±1.4)	4.9 (±1.6)	8.4 (±2.6)	2.0 (±1.7)
% whose main reason for not using a condom every time they had sexual intercourse during the past 12 months was because sex was unexpected, and they had no time to prepare	2.2 (±1.7)	3.6 (±3.1)	1.3 (±1.0)	3.1 (±1.5)	4.2 (±1.3)	2.2 (±1.8)	4.9 (±2.1)	5.2 (±3.8)	4.5 (±2.1)
% who would most likely get a condom from a pharmacy, clinic or hospital if they wanted one	56.1 (±5.3)	49.6 (±6.2)	60.8 (±6.7)	51.9 (±5.1)	52.9 (±4.8)	51.1 (±7.2)	36.5 (±5.8)	35.6 (±8.0)	37.5 (±8.4)
% of students who had sexual intercourse during past 12 months, who used a condom the last time they had sexual intercourse	*	*	*	*	*	*	*	*	*
% who drank alcohol or used other drugs before they had sexual intercourse the last time	3.3 (±1.6)	5.9 (±2.8)	1.6 (±1.0)	2.3 (±1.2)	2.7 (±1.8)	1.7 (±1.2)	5.3 (±1.9)	9.8 (±4.1)	1.3 (±1.7)
% who had ever been told by nurse or doctor that they had an STI	9.8 (±3.0)	11.1 (±3.8)	8.8 (±3.1)	9.4 (±2.5)	11.3 (±2.9)	7.6 (±2.7)	14.5 (±3.6)	16.7 (±3.9)	12.5 (±4.5)
% who know how to tell someone that they do not want to have sexual intercourse with them	59.5 (±5.9)	51.3 (±5.3)	65.5 (±7.2)	56.2 (±7.6)	53.6 (±8.4)	58.8 (±8.8)	49.2 (±5.2)	43.6 (±4.2)	54.6 (±7.9)
% who had talked about HIV and AIDS with their parents or guardians	62.7 (±5.9)	50.4 (±8.7)	71.6 (±3.8)	67.4 (±2.1)	64.0 (±3.7)	70.5 (±2.4)	67.2 (±4.0)	65.4 (±4.3)	68.8 (±6.0)

* Less than 100 students.

In Manicaland province 18.1% of students had had sexual intercourse during their life. This was significantly higher than the 10% reported in Harare. Male students in all the provinces [Harare 17.5% vs. 3.9%, Matebeleland North 21.9% vs. 5.3% and Manicaland 28.0% vs. 9.6%] were significantly more likely than female students to have had sexual intercourse. Overall, 4.9% to 11.6% of students initiated sexual intercourse before age 13 years. In all the provinces male students were significantly more likely than female students to have initiated sexual intercourse before age 13 years. Overall, in all provinces 5.5% to 14.9% of students had sexual intercourse with multiple partners (i.e., two or more) during their life. In all provinces male students [Manicaland (22.2% vs. 8.6%), Harare (9.9% vs. 1.7%), Matebeleland North province (13.6% vs. 2.7%) were significantly more likely than female students to have had multiple partners. Overall, 3.9% to 6.0% of students had sexual intercourse during the past 12 months. Male students [Manicaland (9.0% vs. 3.4%), Harare (6.2% vs. 2.2%), and Matebeleland North (6.5% vs. 2.2%] were significantly more likely than female students to have had sexual intercourse during the past 12 months.

Among students who had sexual intercourse during the past 12 months, 1.9% in Matebeleland North to 4.9% in Manicaland reported most of the time or always used a condom when they had sexual intercourse. In Manicaland male students (8.4%) were significantly more likely than female students (2.0%) to have used a condom most of the time or always when they had sexual intercourse in the lat 12 months. In Matebeleland North (2.2%), Harare (3.1%) and Manicaland (4.9%) reported the main reason for not using a condom every time they had sexual intercourse during the past twelve months was because sex was unexpected and they have no time to prepare. In all provinces, significantly more females were more likely to have as their main reason to not have sexual intercourse as being they wanted to wait until they are married. In Matebeleland North (5.9%) and Manicaland (9.8%) male students were more likely to drink alcohol or use other drugs before they had sexual intercourse the last time compared to female students in Matebeleland North (1.6%) and Manicaland (1.3%). Overall, 62.7% to 67.4% of students ever talked about HIV or AIDS with their parents or guardians. Male students in Matebeleland North (50.4%) and Harare (64.0%) were significantly less likely than female students in Matebeleland (71.6%) and Harare (70.5%) to have talked about HIV or AIDS with their parents or guardians.

4.8 Tobacco Use

About one in three or 1.1 billion people worldwide smoke. Among these, about 80% live in low- and middle-income communities (33). By 2020, the tobacco epidemic is expected to kill more people than any single disease. By 2020, tobacco use will cause about 18 percent of all deaths in developed countries and about eleven percent of all deaths in developing countries. Tobacco use is a known or probable cause of about 25 diseases including heart disease, cancer, stroke, and chronic obstructive pulmonary disease. Smokeless tobacco use causes oral cancer in the lip, tongue, mouth, and throat areas and digestive system cancers. Most people who use tobacco initiate use prior to age 18. Exposure to tobacco smoke in the environment can aggravate allergies and increase the severity of symptoms in children and adolescents with asthma and heart disease; it is also associated with lung cancer (34). Family members, film stars, and sports heroes who use tobacco influence whether children and adolescents choose to use tobacco (35).

Table 8: Tobacco use among students, by sex, 2003.

TOBACCO USE									
FACTOR	MATEBELELAND NORTH			HARARE			MANICALAND		
	total	male	female	total	male	female	total	male	female
% smoked cigarette ≥1 days in past 30 days	8.3 (±2.0)	10.6 (±4.3)	6.6 (±2.6)	5.8 (±0.9)	9.6 (±1.9)	2.2 (±1.1)	10.2 (±2.3)	11.8 (±3.7)	8.6 (±3.3)
% who used any other forms of tobacco in ≥1 of past 30 days	9.6 (±2.4)	12.4 (±3.8)	7.6 (±2.4)	7.9 (±2.3)	10.5 (±2.8)	5.2 (±2.4)	15.8 (±4.8)	17.2 (±4.3)	14.5 (±6.5)
% who used any tobacco in past 30 days	11.4 (±1.8)	13.8 (±3.7)	9.8 (±2.9)	8.7 (±2.1)	13.2 (±3.0)	4.5 (±1.7)	14.1 (±3.6)	16.6 (±4.3)	11.7 (±4.8)
% who tried to stop smoking cigarettes of those who smoked in the past 30 days	56.6 (±7.4)	*	*	52.1 (±9.5)	*	*	51.9 (±6.2)	*	*
% who reported people smoking in their presence on ≥ 1 of past seven days	51.8 (±5.4)	56.9 (±4.9)	47.8 (±7.4)	52.2 (±3.8)	51.4 (±5.5)	52.8 (±4.6)	46.2 (±6.9)	47.7 (±7.8)	44.6 (±7.5)
% who had a parent or guardian who uses any form of tobacco	31.1 (±4.4)	32.1 (±4.0)	30.1 (±6.1)	30.2 (±2.6)	31.9 (±4.5)	28.5 (±2.9)	32.4 (±4.8)	30.3 (±5.3)	34.6 (±7.1)

Figures in parentheses indicate 95% confidence interval.
* Data not available.

In the three sites students who had smoked cigarettes on one or more days during the past 30 days ranged from 5.8% in Harare, 8.3% in Matebeleland North and 10.2% in Manicaland. Only male students in Harare (9.6%) were significantly more likely than female students in Harare (2.2%) to have smoked cigarettes on one or more days. Overall, 9.6% to15.8% of students used any other form of tobacco on one or more days during the past 30 days. Students in Manicaland 15.8% were significantly more likely than students in the other provinces (Harare 7.9% and Matebeleland North 9.6%) to use any other form of tobacco on one or more days. Among students who smoked cigarettes during the past 12 months, 51.9% to 56.6% tried to stop smoking cigarettes. Overall, 46.2% to 52.2% of students reported that people smoked in their presence on one or more days during the past seven days. Overall, 30.2% to 32.4% of students had a parent or guardian who uses any form of tobacco. There was no significant difference between males and females to have a parent or guardian who uses any form of tobacco.

4.9. Violence and Unintentional Injury

Injuries are a major cause of death and disability among young children (36-37). Each year, 750,000 children die from injuries. Another 400 million children are hurt seriously. In 2000, an estimated 190 000 youth homicides (9.2 per 100 000 population) occurred globally. For every youth homicide, approximately 20 to 40 victims of non-fatal youth violence receive hospital treatment. Many injuries lead to permanent disability and brain damage. Victims of bullying have increased stress and a reduced ability to concentrate and are at increased risk for substance abuse, aggressive behaviour, and suicide attempts (38).

Table 9: Violence and unintentional injury among students, by sex, 2003.

UNINTENTIONAL INJURIES AND VIOLENCE									
FACTOR	**MATEBELELAND NORTH**			**HARARE**			**MANICALAND**		
	Total	**male**	**female**	**total**	**male**	**female**	**total**	**male**	**female**
% in physical fight ≥1 times past 12 months	38.8 (±6.9)	47.1 (±7.1)	32.7 (±7.4)	37.9 (±5.6)	45.2 (±3.2)	30.7 (±8.0)	47.3 (±6.3)	49.2 (±7.1)	45.5 (±6.7)
% seriously injured ≥1 times past 12 months	58.9 (±6.2)	63.1 (±5.4)	55.6 (±8.9)	57.1 (±7.3)	64.3 (±7.7)	50.4 (±7.0)	73.2 (±6.3)	74.2 (±5.9)	72.2 (±8.8)
% of seriously injured students injured whilst playing or training for sports	17.0 (±3.9)	20.8 (±5.8)	13.9 (±4.0)	17.2 (±3.9)	17.2 (±4.4)	17.0 (±5.5)	20.5 (±2.7)	25.6 (±5.3)	14.6 (±2.7)
% of seriously injured students whose injury resulted from a fall	8.9 (±2.4)	10.6 (±4.6)	7.6 (±2.5)	9.2 (±2.9)	10.1 (±4.7)	8.3 (±4.5)	12.2 (±4.1)	12.6 (±4.0)	11.7 (±5.0)
% of seriously injured students whose injury resulted from hurting self by accident	35.7 (±6.4)	29.5 (±9.0)	41.1 (±7.7)	43.4 (±3.9)	41.7 (±6.2)	45.6 (±5.1)	32.0 (±5.4)	31.9 (±6.0)	32.2 (±6.4)
% bullied on ≥1days in past 30 days	59.9 (±6.3)	70.2 (±7.7)	52.5 (±8.2)	55.3 (±3.8)	60.2 (±3.6)	51.1 (±5.0)	67.2 (±4.6)	65.9 (±3.9)	68.6 (±6.4)
% of bullied students, bullied most often by being hit, kicked, pushed, shoved around or locked indoors in past 30 days	20.5 (±3.6)	24.9 (±5.7)	16.2 (±3.9)	21.2 (±4.0)	25.6 (±4.3)	17.0 (±5.0)	22.8 (±3.7)	23.9 (±6.3)	21.7 (±4.0)
% carried a weapon to school for protection on ≥1 days in past 30days	16.7 (±3.9)	23.0 (±2.6)	12.0 (±5.3)	14.0 (±4.0)	16.5 (±4.5)	11.4 (±4.7)	28.8 (±6.7)	31.0 (±6.3)	26.7 (±9.0)
% who did not go to school because they felt unsafe on ≥1 days in past 30 days	29.2 (±5.7)	36.6 (±4.6)	23.8 (±7.4)	30.9 (±5.0)	27.5 (±6.6)	33.4 (±5.8)	41.0 (±7.8)	42.2 (±7.9)	39.9 (±9.3)
% taught in school year what to do if someone tries to force them to have sexual intercourse	43.0 (±8.3)	35.6 (±8.4)	48.6 (±8.0)	40.8 (±8.6)	33.3 (±7.5)	47.6 (±2.4)	35.9 (±6.9)	32.1 (±7.4)	39.5 (±7.3)
% taught first aid skills in class during the school year	43.5 (±4.0)	35.8 (±2.4)	49.4 (±6.4)	34.4 (±3.8)	27.8 (±4.3)	40.8 (±4.6)	44.9 (±4.4)	41.7 (±4.4)	48.0 (±6.3)

% taught how to avoid or prevent accidents e.g. fires or poisoning	55.5 (±4.3)	48.1 (±5.5)	61.2 (±5.6)	47.4 (±4.1)	44.2 (±4.9)	50.1 (±3.7)	47.2 (±6.4)	45.8 (±5.7)	48.6 (±5.8)

Figures in parentheses indicate 95% confidence interval.

In the three provinces the percentage of students who were in a physical fight one or more times during the past 12 months ranged from 37.9% to 47.3%. There was no significant difference in the three provinces and only in Harare province were male students (45.2%) significantly more likely than female students (30.7%) to have been in a physical fight. Manicaland reported a significantly higher percentage (73.2%) of students who were seriously injured one or more times during the past 12 months than the other two provinces (Matebeleland 58.9% and Harare (57.1%). Male students were not significantly more likely than female students to have been seriously injured. Among students who were seriously injured during the past 12 months, 17.0% to 20.5% were playing or training for a sport when their most serious injury happened to them, 8.9% to 12.2% had their most serious injury caused by a fall, and 32.0% to 43.4% had their most serious injury occur as a result of hurting themselves by accident. In all instances male students were not significantly at a higher risk than female students.

Overall, 55.3% to 67.2% of students were bullied on one or more days during the past 30 days. Male students in Matebeleland North (70.2%) and Harare (60.2%) were significantly more likely than female students [Matebeleland North (52.5%) and Harare (51.1%) to be bullied on one or more days. Among students who were bullied during the past 30 days, 20.5% to 22.8% were bullied most often by being hit, kicked, pushed, shoved around, or locked indoors. No significant differences were noted between the sexes. Students in Manicaland (28.8%) were significantly more likely than students in Harare (14.0%) and Matebeleland North (16.7%) to carry a weapon to school for protection on one or more days in past 30 days. The percentage of students who had been taught in school year what to do if someone tries to force them to have sexual intercourse ranged from 35.9% to 43.0%. Overall, 34.4% to 44.9% of student had been taught first aid skills in class during the school year.

5. DISCUSSION

5.1 Alcohol and Other Drug Use

The percentage of students who drank alcohol on one or more days of the past 30 days ranged from 15.4% to 20.0%. Surprisingly, there were no differences when compared by sex in all regions. Munodawafa, Marty and Gwede sampled students from rural secondary schools in Zimbabwe (mean age 15.9years) and found the following for lifetime experience (ever used): alcohol 27.0% (boys) and 19.6% (girls).[41] Zindi sampled 2 000 secondary school students from both the rural and urban areas and found that the reported experience with alcohol and/or tobacco between students at urban and rural schools were not statistically significant.[42] In contrast, two studies compared by Acuda and Eide demonstrated significant differences between the genders and between four different socioeconomic strata of the Zimbabwean society. Sub-samples were drawn from rural, high density urban, low density urban and private high fee paying schools.[43]

Alcohol remains the most common used drug (15.4% to 20.0%) as compared to other drugs such as marijuana and glue (7.7% to 15.1%). Only in Manicaland is there no difference in the consumption rates.

Very few students obtain their beer from shops (1.8% to 3.9%) and this could be because they usually do not drink clear beer, lagers or stout. The issues of cost might also play a part. We need to explore further the source of the alcohol they consume.

Only about half of the students reported having been taught in class the dangers of using alcohol, marijuana and glue and this is an area which needs to be addressed in the curriculum.

5.2 Hygiene

Manicaland province reported the worst hygiene standards compared to the other two provinces. Statistically significant poor outcomes were reported in the following areas; not washing hands under running water before eating, never or rarely wash hands after toilet, no place to wash hands after toilet at school, and never or rarely used soap when washing hands. Schools in Manicaland were mostly rural except for two. In Matebeleland North almost half the schools were urban and Harare schools were all urban. The results reflect the poorer sanitary conditions in the rural areas.

According to the 1999 Zimbabwe Demographic Health Survey, piped water is available in 98% of all household in urban areas, compared to 17% in rural areas. In rural areas, boreholes are the main source of drinking water (42%), followed by unprotected wells (18%). Most households in urban areas (94%) have flush toilets. In rural areas, the most common toilet is the Blair latrine

(36%) or pit latrine (22%). 40% of rural areas have no toilet facilty.[44] It can therefore be inferred that the standard of water and sanitation facilities at rural schools are poorer than those in the urban areas.

5.3 Mental Health

Almost four out of ten students reported feeling sad or hopeless almost everyday for two weeks or more that they stopped doing their usual work. Manicaland reported a statistically higher percentage compared to Matebeleland North. Manicaland also reported a significantly higher proportion of students who seriously considered attempting suicide in the past 12 months. It has always been assumed that in rural areas there is a closer knit community which would make mental problems less common.

Mental health problems are becoming increasingly common among young people. This is because they are vulnerable to the kinds of stress that promote mental health. Some of the more serious disorders are not often recognized and treated. Mental health problems often lead to: suicide, risky behavior, disruptive behaviours, physical inactivity, poor academic performance and school dropout.[45]

In many countries, suicide rates among adolescents, is on the increase. However, in Africa, suicide is under-reported. Generally for every completed attempt at suicide, there are at least 40 unsuccessful attempts. Young men are more likely to commit suicide than young women, while more women attempt it.[45] In all the three provinces, the percentage of students who considered attempting suicide in the last 12 months was the same of those of students who had made plans about how they would attempt the suicide. Only about 3 in ten students had been taught in class causes of mental disorder and only about 4 in ten had been taught in class where to get help on mental health problems.

5.4 Physical Activity

Surprisingly 85% of all students participated in insufficient activity in all the three provinces. There was no significant difference between the sexes. Participating in adequate physical activity throughout the life span and maintaining normal weight are the most effective ways of preventing many chronic diseases, including cardiovascular disease and diabetes[13]. Participating in adequate physical activity also helps build and maintain healthy bones and muscles, control weight, build lean muscle, reduce fat, reduce feelings of depression and anxiety, and promote psychological well-being [15].

Very little information is available in the country on this subject. There is need to explore the issues raised in this section in another survey. It is also important in the future, to link these findings with those from the dietary module which unfortunately was missed in this survey.

5.5 Protective Factors

In the three sites, almost a third of students reported missing classes or school without permission on one or more of the past 30 days. Male students were not significantly more likely than female students to miss classes or school without permission. Less then half of the

parents/guardians, checked whether homework was done most of the time. Again less than half of the students reported that their parents/guardians understood their problems and worries most of the time or always during the past 30 days or really know what they are doing with their free time most of the time or always.

King, in a study in South Africa showed that family structure was also significantly related to rape as persons who lived with a single parent (OR 1.74, CI1.00 to 3.04) and those who resided with one biological parent and one step parent (OR=2.59, CI=1.34-5.01) were more likely to have been victims of sexual abuse than those living with both biological parents.[46] There is greater need to involve parents in the school programs.

5.6 Sexual Behaviours That Contribute to HIV Infection, Other STI, and Unintended Pregnancy

Manicaland province (18.1%) showed a significantly higher proportion of students who had ever had sexual intercourse compared to Harare (10.0%). The initiation of sexual intercourse is a milestone in the physical and psychological development of men and women in all societies and both the timing and context of the event within which it occurs can have immediate and longer term consequences. In a comparative study by Singh Susheela et. al. Zimbabwe had the highest median age of sexual debut in Africa.[47]

Percentage of 20-24 year olds who became sexually active before each specific single year of age, and median age at first intercourse, by country, according to gender

Country	Women							Men						
	Years in ascending order							Years in ascending order						
	15	16	17	18	19	20	Median age	15	16	17	18	19	20	Median age
	Percentage							Percentage						
Ghana	15	34	52	66	81	88	**16.9**	10	23	33	43	59	70	**18.4**
Mali	25	55	72	82	91	94	**15.8**	7	17	26	38	54	64	**18.7**
Tanzania	15	30	45	58	72	81	**17.4**	10	29	42	52	70	77	**17.8**
Zimbabwe	**7**	**15**	**26**	**38**	**53**	**66**	**18.8**	**8**	**15**	**28**	**38**	**56**	**72**	**18.7**

Like in this analysis, male students were likely to have had sexual intercourse. However, the difference noted in this study as well as the 1999 Zimbabwe Demographic Health Survey was that in this GSHS, a rural population had a higher percentage of students who had had sexual intercourse compared to an urban population.

What was more disturbing was that 14.9%of the students in Manicaland had already had sex with two or more partners putting them at risk. Only 4.9% in the same province reported using a condom most of the time or always when they had sexual intercourse in the last 12 months. If the adolescents use effective methods of protection against pregnancy and STDs, and if their decision to enter into the relationship is voluntary, physical and psychological risks are minimal.[47] In this survey, the level of condom use was very low, and some students reported using alcohol and drugs before the encounter which would then limit their capacity to act responsibly. Moreover about 10% of the students reported having been told by a doctor or nurse

that they had an STD. What was more comforting was that about two-thirds of the students had talked about HIV and AIDS with their parents or guardian.

The Government of Zimbabwe estimates that 24.6% of the adult population between 15 and 49 year age group were HIV positive in 2003. the 2001, Zimbabwe Young adult survey, a national representative population based survey of the HIV risk behaviours and prevalence among young adults aged 15 to 29 years found a prevalence of 22% among young women and 10% among young men (CDC/UNAIDS 2003).

5.7 Tobacco Use

The findings from the GSHS survey are not significantly different from those obtained from the Global Youth Tobacco Survey which uses the same methodology and was carried out at the same time.

TOBACCO USE						
FACTOR	MATEBELELAND NORTH		HARARE		MANICALAND	
	Total (GSHS)	Total (GYTS)	Total (GSHS)	Total (GYTS)	Total (GSHS)	Total (GYTS)
% smoked cigarette ≥1 days in past 30 days	8.3 (±2.0)	10.7 (±1.5)	5.8 (±0.9)	6.0 (±1.5)	10.2 (±2.3)	10.5 (±2.9)

More than half of the current smokers indicated the desire to stop smoking. This indicates the great desire amongst the students to quit smoking. This finding indicates the need to expand the drug education efforts in schools to ensure that the susceptible group does not initiate smoking at all as they would having problems in quitting. There is also need for further research to develop effective strategies to assist teenagers in quitting the smoking habit. Only in Harare, was there any sex difference in the group of current smokers, where females were less likely to smoke than the males. A whole report on the Global Youth Tobacco Survey and the recommendations is available.

5.8 Violence and Unintentional Injury

Violence is becoming a problem among adolescence. More than a third of the students reported having been in a physical fight. Only in Harare was there a significant difference in the females and males. About 15% of students in Matebeleland and Harare reported carrying a weapon to school whilst almost twice the number in Manicaland carried weapons to school. The vast majority of serious injuries resulted from hurting self by accident and there is need to teach students how to avoid accidents. Overall, less than half of the students had been taught in class what to do if someone tries to force them to have sexual intercourse, how to avoid or prevent accidents and any first aid skills. Bullying remains a major problem and males are more likely to be bullied than females.

6. CONCLUSIONS

- In this survey, alcohol was the most abused substance and there was no significant difference among the sexes. Given that earlier surveys reported a lower consumption by female students, there is need to ensure that both groups are targeted during health education talks in school.

- Only about half the students were taught in school the dangers of alcohol and drug abuse and there is need to review the duration of lessons and curriculum content on alcohol, drug and tobacco use.

- Very few students obtain their alcohol from shops and there is need to explore further on their sources and then explore on the necessary legislation to stop the supply.

- The schools scored poorly on most of the hygiene factors. Hygiene education will be of limited success without provision of adequate water and sanitation in schools. By providing these facilities, schools can reinforce health and hygiene messages and act as an example to the wider community. There is deliberate need to target rural schools in all water and sanitation community development programmes.

- The survey exposed high level of mental disorders among the students. Issues pertaining to mental health are not well covered in the school year. There is need to promote mental health and life skills development in schools curriculum. The community, teachers and health workers will need training on how to provide adolescent friendly mental health services. In-school peer counselor can be used to promote positive relationships among students.

- Few students in this survey participated in sufficient physical activity. There is need for another survey to explore further the issues raised. The next GSHS in the country should also include the Dietary Module as physical activity and dietary issues are closely linked.

- This survey reinforces the need to establish and reinforce intervention programs which are not only school based but involve the family structures, community prevention programs and government agencies to help prevent adolescent harmful practices. Behavioural studies and IEC material development can be used to address some of the problems.

- More than half of students who are current smokers have tried to quit smoking. There is need not only to continue focusing on prevention programs but to also focus on youth cessation programs as well.

- Male students in all the provinces were significantly more likely than female students to have had sexual intercourse. There was a high level of reported multiple partners and low condom use. Parents and guardians need to be supported and encouraged to continue talking about HIV and AIDS with their children. Abstinence and safer sex messages should continue to be advocated for and guided by operational research.

- Despite the legislation in the country, almost half the students report people smoking in their presence. Environmental exposure to students is harmful and there is need to reinforce the message.

- The survey showed high levels of physical fights, bullying and injuries. Multi-sectoral taskforces need to address these concerns. In addition there is need to review the curriculum content on first aid skills and accident prevention programs.

- A follow up GSHS survey is essential to establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion. The Zimbabwe GSHS should include the dietary factors module in the next survey.

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